COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

RELEASED

B-163074

JUN 2 1972

Dear Mr. Chairman:

The General Accounting Office has continued its review of the development of the Army's Combat Service Support System (CS3) to provide your Committee with information on the Army's actions and progress since our last report dated May 7, 1971 (B-163074).

We found that (1) CS3 subsystems were being modified or replaced, (2) compatibility between CS3 and two other major computer-based systems had not been adequately demonstrated, (3) test results had not satisfied certain test objectives, and (4) the cost-effectiveness analysis of the system was questionable. Although the Army has continued its efforts to correct deficiencies in CS3, we believe that additional testing and evaluation are necessary before a definite plan can be made for deployment.

INTRODUCTION

CS3 is a mobile, computer-based system designed to increase the readiness of combat units by improving the efficiency and responsiveness of combat support at the division, corps, and depot levels.

As of February 1972 the Army planned to deploy CS3 to 13 active divisions between October 1972 and September 1975. Reprograming of fiscal years 1972 and 1973 funds to begin equipment procurement would have been necessary to meet this deployment schedule. The Army does not intend to extend CS3 to the corps and depot levels until system requirements are more clearly defined and developed.

The Army estimated that $66.1 million had been spent on CS3 through June 30, 1971, and that costs to deploy to the 13 divisions would be about $48.3 million, excluding additional subsystem development costs. Operating costs of the division level systems through June 30, 1975, are estimated at $36.2 million.

CHANGES TO BE MADE IN CS3

CS3 is currently composed of personnel, supply, and maintenance subsystems and has teleprocessing features. The

personnel and maintenance subsystems are to be replaced completely, the supply subsystem and teleprocessing computer programs are to be modified, and new teleprocessing hardware is to be obtained prior to the deployment. In our opinion these changes will result in a system considerably different from the system developed and tested during the past 6 years.

The current personnel subsystem is to be replaced by the Standard Installation/Division Personnel System (SIDPERS). Prototype testing and evaluation of SIDPERS is to start in June 1972 at Fort Riley, Kansas, and additional tests are to be made on the CS3 hardware at Fort Hood, Texas, in July 1972.

An interim maintenance subsystem is scheduled to replace the current CS3 maintenance subsystem prior to deployment. Only a part of the interim system is to be tested prior to deployment. The interim subsystem is to be replaced with a standard subsystem; however, no target date has been set for implementation of the standard subsystem.

Modifications are to be incorporated into the division supply subsystem prior to deployment. Several of these modifications are intended to correct deficiencies in the subsystem's financial management feature. This subsystem will also be modified to include a standard demand analysis feature which will replace the simplified version used during previous CS3 tests. This feature forecasts future inventory requirements on the basis of previously recorded demand data and determines what levels of stocks should be retained. After the standard demand analysis feature is installed, certain other modifications are to be installed and tested as a package at Fort Hood prior to deployment.

The current teleprocessing features are to be modified to accommodate new high-speed transceiver equipment as well as to provide a standard interface between CS3 and the Automatic Digital Network. The changes in the teleprocessing programs are scheduled for testing during July 1972.

COMPATIBILITY BETWEEN CS3 AND OTHER SYSTEMS NOT DEMONSTRATED

Compatibility between CS3 and the Joint Uniform Military Pay System (JUMPS) and the Base Operating Information System (BASOPS) has not been demonstrated, and several problem areas have been identified. We believe that it is essential that problems relating to the compatibility between computer systems be resolved before deployment.

The accuracy and timeliness of CS3 data required for JUMPS has caused a compatibility problem. Changes to correct deficiencies in the CS3 personnel subsystem to resolve the accuracy problem were reportedly made in December 1971. As indicated earlier SIDPERS will replace the current CS3 personnel subsystem. The compatibility of SIDPERS and JUMPS cannot be demonstrated until development and testing of SIDPERS is complete.

Several unresolved problems in BASOPS significantly affect its compatibility with CS3. For example, the BASOPS supply system at Fort Hood does not support the CS3 feature which automatically produces requests for status on supply requisitions. This problem has precluded testing this CS3 feature.

The CS3 financial management feature, although not intended to be a formal obligation accounting system, must provide (1) divisions with sufficient information to facilitate timely decisions related to supply-funding requirements and operations and (2) host installations with sufficient information to prepare reports and budget submissions. The Army is working on several problems affecting the financial management feature. In our opinion, until these problems are resolved, this feature cannot be evaluated and its compatibility with BASOPS cannot be demonstrated.

CS3 TEST OBJECTIVES NOT ACCOMPLISHED

Our May 1971 report discussed several of the objectives in the system test and evaluation plan (STEP), which, in our opinion, were not met. We believe that CS3 test results have not accomplished some of the more important objectives in STEP. For example, the ability of the CS3 division level system, under tactical conditions, to (1) handle combat volumes of data on a current basis and (2) provide sufficient residual computer time to permit adequate backup support for other divisions has not been demonstrated. Because this ability has not been demonstrated and because significant changes are being made to CS3 subsystems, as discussed earlier, we believe that additional testing and evaluation of CS3 will be needed to satisfy the objectives in STEP.

In January 1972 the Army revised the STEP which had been approved by the Secretary of Defense in June 1966. According to the Army, the revised plan updated the original STEP to (1) reflect changes in hardware, systems, and testing that had

been required over the past 6 years and (2) concentrate on field testing and evaluating division-level systems as opposed to the corps and depot level systems. We were advised that further revisions were to be made in STEP to further update the test objectives.

COST-EFFECTIVENESS ANALYSIS QUESTIONABLE

A review by the Office of the Assistant Secretary of Defense (OASD) (Comptroller) of the Army's cost analysis for CS3, dated September 29, 1971, pointed out that the analysis did not show that the two CS3 alternatives presented would produce hard dollar savings, e.g., reduction in inventories and personnel requirements. OASD also stated that the analysis had failed to demonstrate any decisive improvement in major areas of division effectiveness with CS3 when compared with Army divisions using the existing systems. OASD also questioned the need for further investigation into CS3 cost effectiveness and concluded that:

> "*** unless overriding considerations, such as a clear operational necessity, can be demonstrated and documented, the Army should give serious and objective consideration to terminating the CS3 project ***."

Our review of the cost analysis confirmed the OASD conclusions that the Army had not established that CS3 was cost effective.

AGENCY ACTIONS AND CONCLUSIONS

We discussed our observations with the Army in January and February 1972. The Army, through OASD, advised us late in March 1972 of revised CS3 plans which provide for testing the changes contemplated in the personnel, maintenance, and supply subsystems and in the new teleprocessing features before deployment. It is planned that the system tests and evaluations will be completed by September 1972, that approval of the system for deployment will be sought in October 1972, and that deployment to the division level will start in March 1973.

We believe that the Army's efforts to standardize computerized information systems are laudable and that the Army is now following a sound approach to the development of CS3. However, the plan to begin deployment to the division level in March 1973 appears to us to be optimistic in view of the

Army's past performance in developing CS3 and other major computer-based systems. We therefore suggest that firm plans for deployment be deferred until the Army has demonstrated that CS3 is a workable system and is cost effective. We will continue to monitor the testing and development of the system so that the Committee can be kept informed.

As agreed, copies of this report are being sent to the Secretary of Defense and to the Secretary of the Army for internal use only. We plan to make no further distribution of this report unless copies are specifically requested, and then we shall make distribution only after your agreement has been obtained or public announcement has been made by you concerning the contents of the report.

Sincerely yours,

For the E. A. Morse, Jr.

Comptroller General
of the United States

The Honorable George H. Mahon
Chairman, Committee on Appropriations
House of Representatives